REMARKS

The Office Action dated September 25, 2003 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims, 1-3, 5-12, 15-17 and 19-26 have been canceled without prejudice. New claims 27-48 are comparable to the canceled claims, but have been written to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 27-48 are respectfully submitted for reconsideration.

The Official Action indicated that claims 1-8, 11, 12, 15-22, 25, and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Taniguchi* (Japanese Patent Publication No. 09-197825). Applicant notes that claims 4 and 18 have been canceled without prejudice. To the extent that this rejection is applied to any of the presently pending claims, applicant submits that the presently pending claims recite subject matter which is neither disclosed nor suggested in the cited prior art.

Claim 27, comparable to original claim 1, and upon which claims 28-37 are dependent, is directed to a product ejecting apparatus for an injection molding machine. The apparatus comprises a first drive unit and a second drive unit. A first transmission unit is rotatably and reciprocatably disposed, wherein operating of the first drive unit results in a rotation of the first transmission unit. Operating of the second drive unit results in a reciprocating movement of the first transmission unit. A second transmission

unit is rotatably and reciprocatably disposed, wherein operating of the second drive unit results in a rotation of the second transmission unit. Operating of the first drive unit results in a reciprocating movement of the second transmission unit. An ejector pin is configured to reciprocate based upon a motion of the first transmission unit. A working member is connected to the second transmission unit, wherein a movement of the second transmission unit results in reciprocating movement of the working member. The first and second transmission units comprise a motion conversion unit which converts rotational motion of one of the transmission units to linear motion of the other transmission unit.

Independent claim 38, upon which claims 39-48 are dependent, is directed to a product ejecting apparatus comprising a first drive means, a second drive means, a first transmission means, and a second transmission means. These means are in conjunction with an injection means and a working member. The relationship of the various means of claim 38 is comparable to the relationship of the first drive unit, second drive unit, first transmission unit, second transmission unit, ejector pin, and working member of claim 27.

As a result of the claimed configuration of elements, a product ejecting apparatus is provided such that rotation of a first transmission unit or transmission means causes a reciprocating movement of a second transmission unit or transmission means, and a rotation of the second transmission unit causes a reciprocating movement of the first transmission unit or means. This configuration results in effective and efficient product

ejection wherein a working member and an ejector pin can operate concurrently, and in conjunction with other elements of the invention, shorten molding cycle times. Applicant respectfully submits that the cited prior art fails to disclose or suggest the elements of the claimed invention, and therefore fails to provide the critical and unobvious advantages which are provided by the invention.

Tanaguchi discloses a raw material resin 3c in a raw material supply hopper 16 is made to be a molten, kneaded resin 3b by the rotation of the screw 4 of a servomotor 11 to be stored in the tip part of an injection cylinder 13. A mold opening/closing toggle T is extended by a mold control servomotor 31 for mold clamping, and a measured, kneaded, molten resin 3e is injected into a mold cavity by an injection servomotor 12 for filling. With a mold 1 clamped, a fixed mold 1a side gate is closed by a servomotor 40. At the end of curing the packed resin, the servomotor 31 is actuated reversely, a toggle mechanism T is loosened, the mold is separated, after the end of mold opening, a gate part is protruded by an ejecting servomotor 51 to be dropped, and the molding is demolded outside the mold 1 by the reverse actuation of a servomotor 45. In other words, operation of servomotor 40 in *Tanaguchi* results in reciprocating movement of a gate cutting bar 30b; operation of servomotor 51 results in reciprocating movement of product ejecting pin 27d. See the attached EP equivalent of the attached *Tanaguchi* reference.

Although there may appear to be some similarities between certain elements of *Tanaguchi* and certain elements of the claimed invention, operation of servomotor 40

results in rotation of a driven pulley 43, but operation of servomotor 51 does not result in reciprocating movement of driven pulley 43. This is a significant distinction from the subject matter of the presently pending claims.

If one were to consider driven pulley 43 of *Tanaguchi* to be comparable to the first transmission unit of the present claims, and driven pulley 54 of *Tanaguchi* were to be considered comparable to the second transmission unit of the present invention (not admitted), a combination of driven pulley 43 and driven pulley 54 does not form a motion conversion unit or motion conversion means. Rotation of driven pulley 54 does not and cannot cause a reciprocating movement of driven pulley 43. Therefore, a person of skill in the art would recognize that the subject matter of *Tanaguchi* cannot properly be considered to form a basis upon which to reject any of the presently pending claims.

With respect to the dependent claims, applicant respectfully submit that each of the dependent claims recite additional limitations on the independent claims. Since *Tanaguchi* does not provide a basis upon which to reject any of the independent claims, *Tanaguchi* would similarly form an improper basis upon which to reject any dependent claims.

The Official Action took the position that the term "single motion conversion unit" as disclosed in the specification converts rotational motion to linear motion, and further took the position that *Tanaguchi* "matches" the claimed invention. As discussed above, it is respectfully submitted that *Tanaguchi* does not disclose or suggest the subject matter of the present invention.

The Official Action indicated that "claims 9 and 23" were rejected under 35 U.S.C. §103(a) as being unpatentable over *Tanaguchi*, and further in view of *Fujishiro*. As discussed during the personal interview on May 7, 2003, and as discussed in the Response filed by the applicant on June 4, 2003, this rejection does not appear to be logical. Claims 9 and 23, submitted herein as claims 34 and 45, were directed to the movement restricting unit and/or movement restricting means as comprising brakes. It is not seen how the elements of *Fujishiro*, even as interpreted in the Office Action, could be understood as disclosing or suggesting any types of brakes. It is respectfully requested, therefore, that a new, non-final Official Action, be issued, which properly sets forth the rejection which is sought to be made regarding *Fujishiro*. Applicant notes that claims 10 and 24, submitted herein as claims 36 and 46, were directed to a movement restricting unit or movement restricting means. In the event that this rejection is intended to apply to claims 10 and 24 instead of claims 9 and 23, applicant respectfully submits that *Fujishiro* fails to cure the significant deficiencies which are discussed above, with respect to *Tanaguchi*.

Fujishiro discloses a method for controlling an ejector and injection molding machine. The injection molding machine includes a return pin 18 and a return spring 19 disposed to enclose the return pin 18 for biasing an upper ejector plate 6 rearwardly. An ejector rod 26 is disposed at the rear end of the lower ejector plate 7 and driven by a driving device 54 for advancing and withdrawing movement into and out of contact therewith. The driving device 54 comprises, for example, an ejector cylinder. Applicant

respectfully submits that attempting to apply the elements of *Fujishiro* to the subject matter of claims 9 and 23, now claims 34 and 45, does not provide a basis upon which to reject these claims.

Claims 10 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Tanaguchi*, and further in view of *Heindl*. *Heindl* is cited as disclosing brakes to allow for holding of a drive unit. However, as discussed above, claims 10 and 24, now claims 34 and 46, are directed to the movement restricting unit or movement restricting means comprising a spring. *Heindl*, therefore, cannot properly be applied to claims 10 and 24, since there is no disclosure nor suggestion in *Heindl* regarding these elements.

In view of the above, applicant respectfully submits that certain clear and important distinctions exist between the claimed invention and the cited prior art. Applicant respectfully submits that these distinctions are more than sufficient to render the claimed invention unobvious to a person of ordinary skill in the art. With respect to claims 9, 10, 23, and 24, this Office Action plainly is improperly applying the references of *Fujishiro* and *Heindl* to original claims 9 and 23. If this application is not deemed to be in condition for allowance, therefore, it is respectfully requested that a new, non-final Official Action be issued wherein the wording of the claims is properly aligned with the assertions in the Office Action.

However, it is respectfully submitted that the secondary references fail to cure the significant deficiencies which exist in the primary reference of *Tanaguchi*. It is therefore

respectfully requested that each of presently pending claims 27-48 be found allowable, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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Enclosures: EP equivalent of Japanese Patent Publication No. 09-197825.